GOLD CANYON SEWER COMPANY

DOCKET NO. SW-02519A-06-0015

SURREBUTTAL TESTIMONY

OF

WILLIAM A. RIGSBY, CRRA

ON BEHALF OF

THE

RESIDENTIAL UTILITY CONSUMER OFFICE

AUGUST 30, 2006

	Surrebuttal Testimony of William A. Rigsby Docket No. SW-02519A-06-0015
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INTRODUCTION

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- Q. Please state your name, occupation, and business address.
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 - by the Residential Utility Consumer Office ("RUCO") located at 1110 W.

Washington, Suite 220, Phoenix, Arizona 85007.

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- Please state the purpose of your surrebuttal testimony.
- Α. The purpose of my surrebuttal testimony is to respond to Gold Canyon Sewer Corporation's ("Gold Canyon" or "Company") rebuttal testimony on RUCO's recommended rate of return on invested capital (including RUCO's recommended capital structure and cost of debt) for the

My name is William A. Rigsby. I am a Public Utilities Analyst V employed

Company's wastewater operation located in Pinal County.

- operating expense, or rate design issues in the case?
- Α. No. Those issues and the issue of excess capacity will be addressed in

Will your surrrebuttal testimony address the rate base, operating revenue,

- the surrebuttal testimony of RUCO witness Rodney L. Moore.
- Q. Have you filed any prior testimony in this case on behalf of RUCO?
- A. Yes, on June 16, 2006, I filed direct testimony with the Arizona
 - Corporation Commission ("ACC" or "Commission") on Gold Canyon's
 - application requesting a permanent rate increase. My direct testimony
 - addressed the cost of capital issues associated with Gold Canyon's filing.

Q. 1 How is your surrebuttal testimony organized? 2 A. My surrebuttal testimony contains three parts: the introduction that I have 3 just presented, a summary of Gold Canyon's rebuttal testimony, and a 4 section on the cost of capital issues. 5 6 SUMMARY OF GOLD CANYON'S REBUTTAL TESTIMONY 7 Q. Have you reviewed Gold Canyon's rebuttal testimony? 8 A. Yes. I have reviewed the Company's rebuttal testimony, which was filed 9 on July 27, 2006. 10 11 Q. Briefly summarize the Company's rebuttal testimony. 12 A. The Company's cost of capital witness, Mr. Thomas J. Bourassa, 13 disagrees with my recommendations on capital structure, hypothetical cost 14 of debt and cost of common equity. He is also critical of the methods that 15 I have used to derive my original recommended 9.04 percent cost of 16 common equity for Gold Canyon. 17 18 **COST OF CAPITAL** 19 Q. Have you made any changes to the cost of common equity that you 20 recommended in your direct testimony? 21 Α. Yes. I have revised my recommended cost of common equity downward 22 from 9.04 percent to 8.60 percent. The 8.60 percent figure was derived 23 from an updated discounted cash flow model ('DCF") analysis, which used

an eight-week average of closing stock prices, data published in <u>The Value Line Investment Survey</u> ("Value Line") July 28, 2006 water utility industry update (Attachment A), and updated data from Zacks Investment Research, Inc. (Attachment B). My revised 8.60 percent estimate also takes into consideration forward-looking Value Line projections for the time frame that runs from 2006 through 2011. In addition to updating the stock price data used in the DCF model, I have also updated all of the components used in my capital asset pricing model ("CAPM") analysis, which is also impacted by stock price and interest rate (i.e. treasury yield) activity. Surrebuttal Schedules WAR-1 through WAR-9 will provide support for my revised 8.60 percent figure.

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Q. Has there been any recent activity in regard to interest rates?

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Yes. On Tuesday, August 8, 2006, the Federal Reserve ("Fed") halted its series of seventeen consecutive quarter-point rate increases, which have boosted the federal funds rate from a level of 1.00 percent in mid-2004 to the current rate of 5.25 percent. The Fed's action was influenced by economic data on a slowing U.S. economy that could result in lower levels of inflation. While there is a debate among Fed watchers as to the impact of this pause, some analysts believe that the Fed had actually

gone too far in its rate increase campaign and that rate cuts could be a possibility depending on the direction that the economy takes¹.

- Q. Please explain the main reason why your revised DCF results are lower than the DCF results that were presented in your direct testimony.
- A. The main reason is that the stock prices of the publicly traded water utilities included in my sample have declined in recent months as a result of rising interest rates. Investors who found the yields of these stocks attractive because of lower interest rates, created a demand that forced the prices of these stocks up. Now that interest rates have increased, the shine is off on water stocks and these same investors are selling their shares and putting their funds into instruments with more attractive yields.
- Q. Wouldn't the yields on the water utility stocks in your sample be higher because of the stock price declines?
- A. Yes. That is true. Since the dividends on these stocks have remained constant, the dividend yield component ($D_1 \div P_0$) of my DCF model has increased from an average of 2.03 percent in my direct testimony, to my revised average of 2.36 percent. However, the lower stock prices and the updated Value Line estimates produced a lower DCF growth estimate (g).

¹ Ip, Greg, "Fed Holds Interest Rates Steady As Slowdown Outweighs Inflation," <u>The Wall Street Journal Online Edition</u>, August 8, 2006.

- 16 Q. Ple

- Q. Please explain how the lower stock prices and the updated Value Line estimates produced a lower DCF growth estimate?
- A. The growth component of my DCF model declined from the 7.01 percent estimate presented in my direct testimony to my revised figure of 6.25 percent. The July 28, 2006 Value Line estimates have resulted in a lower internal growth (br) estimate that has dropped from 5.00 percent in my direct testimony to my revised estimate of 4.68 percent. My revised external growth estimates are partially a result of the lower stock prices that have produced lower market to book ratios for all four of the water utilities in my sample (i.e. the market-to-book ratios are moving closer to a ratio of 1.0). The lower market-to-book ratios have contributed to my lower external (sv) growth estimate of 1.57 percent estimate that is 43 basis points lower than the 2.00 percent estimate presented in my direct testimony.
- Q. Please summarize the results of your revised cost of capital analysis.
- A. A summary of my revised cost of capital analysis, on water utilities, is as follows:

<u>METHOD</u>	RESULTS
DCF	8.60%
CAPM	9.11% – 10.56%

- 1 Q. Has Gold Canyon's witness made any changes to the Company-proposed 2 cost of common equity as a result of the Value Line update? 3 A. The Company's witness stated that he had updated his models using data 4 from Value Line's April 28, 2006 water utility industry update for the prior 5 quarter, but is still proposing a 10.50 percent cost of common equity. 6 7 Q. Briefly summarize the positions of the parties to the case in regard to 8 capital structure, cost of debt, cost of equity and weighted cost of capital. 9 A. Both ACC Staff and the Company are recommending debt-free capital
 - A. Both ACC Staff and the Company are recommending debt-free capital structures comprised of 100 percent common equity. RUCO is recommending a hypothetical capital structure comprised of 40 percent debt and 60 percent common equity, with a hypothetical cost of debt of 8.45 percent. The costs of common equity being recommended are as follows:

16	Gold Canyon	10.50%
17	ACC Staff	8.40%
18	RUCO (revised)	8.60%

The weighted costs of capital being recommended by the parties to the case are as follows:

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1		Gold Cany	/on	10.50%
2		ACC Staff		8.40%
3		RUCO (re	vised)	8.54%
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5	Capit	al Structure and Cost o	f Debt	
6	Q.	Does the Company's w	itness recognize that t	he absence of financial risk
7		in the Company-propo	sed capital structure,	comprised of 100 percent
8		common equity, merits	a lower weighted cost of	of capital?
9	A.	No. The Company's wi	tness believes that a c	apital structure comprised of
10		100 percent common e	quity is appropriate giv	ven Gold Canyon's size and
11		the firm-specific risks th	at the Company faces.	
12				
13	Q.	Please address the Co	mpany's position that	your recommended capital
14		structure is inappropriat	e given Gold Canyon's	size.
15	A.	The size arguments u	ised by Mr. Bourass	a in this case have been
16		consistently rejected by	the Commission in p	past rate case proceedings.
17		For all practical purpos	ses, Gold Canyon is	no different from the many
18		water and wastewater s	ystems that comprise	the water utilities used in my
19		sample. These system	s face the same type	s of risks and deal with the
20		same types of problems	that Gold Canyon face	es.
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Q. Do your revised recommendations result in a higher weighted average

Please comment on Mr. Bourassa's description of your hypothetical

Mr. Bourassa's statement fails to take into consideration the fact that my

recommended hypothetical capital structure is higher in equity than the

average level of equity in the capital structures of my sample water

utilities. This specifically takes into account any additional business risk

that Gold Canyon may face. I have also recommended a hypothetical

cost of debt, which includes an upward adjustment of 200 basis points

above the average weighted costs of debt that I calculated for the water

capital structure and my recommended cost of debt are close to both the

2004 capital structure and cost of debt of Algonquin Power Income Fund,

the publicly traded parent company of Gold Canyon. Consequently, Mr.

Furthermore, both my recommended

capital structure as a "one size fits all approach."

17 cost of capital than the average weighted cost of capital of the water

Bourassa's "one size fits all" argument is groundless.

18 utilities included in your sample?

utilities included in my sample.

- A. Yes. As I just stated, my recommended hypothetical capital structure is
- 20 actually heavier in equity than the average capital structure of my sample
- group, which was comprised of approximately 50.0 percent debt and 50.0
- 22 percent equity. This gives Gold Canyon a higher weighted cost of capital
- 23 than the utilities included in my sample, which have an average weighted

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cost of capital of 7.54 percent based on the results of my analysis (Surrebuttal Schedule WAR-9). This 7.54 percent average for my sample is 100 basis points lower than my revised recommended weighted average cost of capital of 8.54 percent for Gold Canyon.

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Cost of Common Equity

- Q. Has Gold Canyon's cost of capital witness made any changes to the Company-proposed cost of common equity of 10.50 percent?
- A. No.

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Q. How did ACC Staff's cost of capital witness arrive at his final cost of equity estimate of 8.40 percent?

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ACC Staff's witness, Mr. Steven Irvine, arrived at his estimate by averaging the results of his DCF and CAPM models to produce an unadjusted average of 9.20 percent. He then reduced his unadjusted average of 9.20 percent by making a downward financial risk adjustment of 80 basis points. This produced his final estimate of 8.40 percent. Mr. Irvine's financial risk adjustment produces the same weighted cost of capital that would be produced by a capital structure comprised of 60.0 percent common equity and 40.0 percent debt, which is the same capital structure that I am recommending in this case. Mr. Irvine's final cost of capital estimate is 14 basis points lower than my revised recommended cost of capital estimate of 8.54 percent.

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- Q. What would your cost of equity estimate be if you were to average the results of your DCF and CAPM models as ACC Staff did before making a financial risk adjustment?
- A. Averaging the results of my revised water company sample DCF result of 8.60 percent, and my revised water company sample CAPM result, using a geometric mean, of 9.11 percent produces an estimate of 8.86 percent, which is 34 basis points lower than ACC Staff's unadjusted 9.20 percent estimate and 168 basis points lower than the Company's 10.50 percent estimate. Averaging the results of my revised water company sample DCF result of 8.60 percent, and my revised water company sample CAPM result, using an arithmetic mean, of 10.56 percent produces an estimate of 9.58 percent, that is 38 basis points higher than ACC Staff's unadjusted 9.20 percent estimate and 92 basis points lower than the Company's 10.50 percent estimate. An average of my revised water company DCF result of 8.60 percent and both of my revised water company CAPM results of 10.56 percent and 9.11 percent results in an estimate of 9.43 percent, which is 23 basis points higher than ACC Staff's unadjusted 9.20 percent estimate and 107 basis points lower than the Company's 10.50 percent estimate. The application of ACC Staff's financial risk adjustment to my 9.43 percent average of all of my models estimates, results in a cost of common equity of 8.63 percent which is 3 basis points higher than my recommended cost of common equity and 7 basis points higher than my recommended weighted cost of capital.

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- Q. Do you believe that Mr. Bourassa is characterizing Gold Canyon's risk properly when making his arguments regarding the risk that Gold Canyon
 - faces as a result of the Company's size?
- A. No. Mr. Bourassa attempts to make a case for a higher cost of common
 - equity for Gold Canyon based on two size arguments.
- Q. What is Mr. Bourassa's first size argument?
- capital structure and deals with unique business risks faced by Gold
 Canyon as a result of the Company's size. However, in making this first
 - argument he completely ignores the fact that Gold Canyon is a wholly

Mr. Bourassa's first size argument was addressed earlier in my section on

- owned subsidiary of Algonquin Power Income Fund, a large publicly
- traded entity that has access to capital markets. He also fails to recognize
- the fact that, in order to recognize the possibility of additional business risk
- that is unique to the Company, I am recommending a capital structure that
 - is heavier in equity than the capital structures of the utilities included in my
- water company sample.
- Q. What is Mr. Bourassa's second size argument?
- A. His second size argument deals with the capitalization of the Company. In
 - making this argument he relies on information on the returns of small
- 22 company stocks contained in Chapter 7 of Ibbotson Associate's SBBI
 - 2006 Yearbook. In making this argument, Mr. Bourassa fails to take into

consideration the seasonal nature of the higher returns of small publicly traded companies known as the "January effect." addressed in Chapter 7 of Ibbotson's text, which essentially states that the only time of the year in which small company stocks outperformed large company stocks is during the month of January. When the excess returns realized in January are removed, there is essentially no difference in the returns of small company stocks and large company stocks. I have always believed that Ibbotson's seasonality discussion is something of a disclaimer for the small capitalization stock results that are presented in Chapter 7 of the SBBI text.

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Q. What exactly is the January effect?

Α. The January effect refers to a situation, which has possibly existed for at least the last forty years, whereby small company stocks outperform large company stocks from the end of December through January. Research conducted in 1981 by Donald B. Keim² and later by Robert A. Haugen,³ revealed that virtually all of the effect occurred in the month of January, and that a large part of the effect occurred within the first five days of January. After these price spikes are factored out, there is virtually no significant difference in the prices (which would affect the rates of return

The anomaly is

² Keim, D.B. "Size-Related Anomalies and Stock Return Seasonality: Further Empirical Evidence," Journal of Financial Economics, Vol. 12, no. 1 (June. 1983): 13-32.

³ Haugen, Robert A. and Philippe Jorion "The January Effect: Still There After All These Years," Financial Analysts Journal. (Jan. Feb. 1996): 27-31.

on the stocks that are used to calculate beta) of small company stocks and large company stocks during the remaining eleven months of the year.

Q. What exactly causes this difference in performance between small company and large company stocks?

A. The conventional wisdom on the subject is that the difference results from both portfolio balancing and tax-loss selling by large institutional investors (i.e. mutual and pension funds) at the end of December. Since this sell off (which results in a drop in small company stock prices) occurs at the end of the year, these same small company stocks tend to rebound during the early days of January. This is due to increased demand for small company stocks from optimistic investors. As a result of this increased demand, the prices of small company stocks are driven up higher than the prices for large company stocks.

Because the year-end sell off may be tax motivated, it has even been suggested that the policies of the federal government would essentially perpetuate the January effect on an annual basis. An absence of the January effect during the mid nineties may have occurred due to a shift in buying habits of younger investors who preferred large company stocks. If this actually were the case, the lack of demand kept the prices of small company stocks down and also in line with the prices of large company stocks. This only strengthens the argument that no real difference exists

between the prices of small company stocks and large company stocks and weakens Mr. Bourassa's argument for a higher return because of Gold Canyon's size.

Q. Are there any merits at all in Mr. Bourassa's size arguments?

A.

No. The size arguments being advanced by Mr. Bourassa have been consistently rejected by the Commission in past rate case proceedings that involved rate case witnesses such as Dr. Thomas Zepp (who Mr. Bourassa cites in his testimony). That aside, given the size and financial strength of the Company's parent, Algonquin Power Income Fund, which is publicly traded on the Toronto stock exchange and owns 100 percent of Gold Canyon, I fail to understand why Mr. Bourassa would even attempt to use size arguments in this case. For all practical purposes, Gold Canyon is no different from many other Arizona water or wastewater systems that are owned by large corporate entities. Nor for that matter is Gold Canyon any different or unique from the many water and wastewater systems that comprise the water utilities used in my sample.

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- Q. Do you believe that Southwest Water Company ("SWWC") should have been excluded from your sample based on its percentage of revenues from water utility services as pointed out by the Company's cost of capital witness?
 - No. Mr. Bourassa believes that I am deliberately biasing my DCF dividend yield estimate downward by including SWWC in my sample. While it is true that regulated water utilities make up approximately 39.0 percent of total revenues for SWWC, those same regulated utilities will generate 67.0 percent of SWWC's 2006 earnings according to Value Line's April 28, 2006 water utility industry update. The majority of SWWC's remaining revenues and earnings are derived from activities that are closely related to the provision of regulated water and wastewater services (i.e. equipment maintenance and repair, sewer pipeline cleaning, billing and collection services, and state-certified water and wastewater laboratory analysis on a contract basis) as opposed to highly speculative activities that are totally unrelated to the water and wastewater industry. In fact, SWWC actually operates a large wastewater facility near Birmingham, Alabama. For these reasons I saw no need to exclude SWWC from my sample.

- Q. Please address the Company's position that, in addition to your dividend yield estimate just discussed, your estimates of external growth are also biased downward.
- A. The Company's cost of capital witness has taken issue with my calculation of "v" for the external growth rate estimate portion of the DCF's growth component. This calculation takes into consideration the fact that, while in theory a utility's stock price should move toward a market to book ratio of 1.0 if regulators authorize a rate of return that is equal to a utility's cost of capital, in reality a utility will continue to issue shares of stock that are priced above book value.
 - As I explained on pages 17 through 18 of my direct testimony, this same assumption was incorporated into the DCF analysis performed by Mr. Stephen Hill, ACC Staff's cost of cost of capital witness in the Southwest Gas rate case proceeding. Mr. Hill used the same methods that I have used in arriving at the inputs for his DCF model. His final recommendation for Southwest Gas Corporation, which was adopted by the Commission, was largely based on the results of his DCF analysis, which incorporated the same valid market-to-book ratio assumption that I have used consistently in cases before the Commission.

- Q. Please discuss the Company's criticism of your testimony that one of the desired effects of regulation is to achieve a market-to-book ratio of 1.0 on the common stock of an investor owned utility.
- A. My direct testimony sets forth the premise that the market value of a utility's stock will tend to move toward book value, or a market-to-book ratio of 1.0, if regulators allow a rate of return that is equal to the cost of capital of firms with similar risk. This premise is recognized among practitioners who have testified in cost of capital proceedings⁴.

A utility's market price should equal its book price over the long run if regulators allow a rate of return that is equal to the utility's cost of capital. That is assuming that the utility's rate of return ("ROR") is comparable to the rates of return of other firms in the same risk class. For example, if a hypothetical utility's book price is \$20.00 per share and regulators adopt a rate of return that is equal to the utility's cost of capital of 10.00 percent, the utility will earn \$2.00 per share ("EPS"). With earnings of \$2.00 per share, and a market required rate of return on equity of 10.00 percent, for firms in the utility's risk class, the market price of the utility's stock will set at \$20.00 per share (\$2.00 EPS ÷ 10.00% ROR = \$20.00 per share price). If the utility records earnings that are higher than the earnings of other firms with similar risk, the market value of the utility's shares will increase accordingly (\$2.50 EPS ÷ 10.00% ROR = \$25.00 per share). On the other

⁴ Carleton, Willard T. and Morin, Roger A.

hand, if the utility posts lower earnings, the stock's market price will fall below book value (\$1.50 EPS ÷ 10.00% ROR = \$15.00 per share).

Because of economic forces beyond the control of regulators, it is not reasonable to assume that the utility will have earnings that match those of firms of similar risk in every year of operation. In some years, earnings may drop causing the market-to-book ratio to fall below 1.0, while in other years the utility may have earnings that exceed those of other firms in its risk classification. However, over the long run the utility's earnings should average out to the earnings that are expected based on its level of risk. These average earnings over time will result in a market-to-book ratio of 1.0. A 1.0 ratio may never be achieved in practice and many investors may not even care what the market-to-book ratio is as long as they receive their required rate of return.

- Q. Has the Company's witness taken issue with RUCO's use of CAPM?
- A. Yes. Mr. Bourassa uses several arguments to support his belief that the CAPM should not have been used in this case. One of his arguments deals with the beta coefficient used in the CAPM and his other argument deals with the model itself and the inputs that I have used.
- Q. Please comment on Mr. Bourassa's argument on beta.
- A. Mr. Bourassa is opposed to the fact that both ACC Staff and RUCO have used the CAPM methodology, which uses the betas of publicly traded

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water utilities as the central input. Because Gold Canyon is not publicly traded and has no beta, Mr. Bourassa believes that the CAPM estimates presented by RUCO and ACC Staff should be rejected. Applying Mr. Bourassa's logic on beta to the DCF, a similar argument could be made that since Gold Canyon has no publicly traded stock then a methodology such as the DCF, which uses the stock prices of publicly traded water utilities, should not be used either (an argument that Mr. Bourassa also advocates in his testimony). If you reject the results of RUCO's, ACC Staff's and Mr. Bourassa's DCF estimates, you are now left with nothing but Mr. Bourassa's risk premium and comparable earnings estimates. Since the risk premium methodology is, for all practical purposes, an offshoot of the CAPM, a good argument could be made to reject those results also given Mr. Bourassa's lack of confidence in CAPM theory. This now leaves only Mr. Bourassa's comparable earnings results, which in his analysis, are principally comprised of only historical information on, and estimates of, returns on book common equity that are by themselves not a firm's actual cost of capital and should also be rejected. We are now left with nothing but the authorized returns approved by regulators that were more than likely based on past recommendations of analysts who in all likelihood used the DCF, CAPM, risk premium and comparable earnings methodologies to arrive at their estimates during periods in which higher costs of common equity may have been warranted. After weighing the fact that the practice of relying solely on the prior authorized rates of

returns authorized by utility regulators (that do not take current economic conditions into consideration) as a method for setting new rates of return has long been discredited as being circular in its logic (and has pretty much been abandoned in favor of estimates derived from forward looking methodologies such as DCF and CAPM), Mr. Bourassa's cost of capital analysis has nothing left to offer other than his unyielding belief that Gold Canyon is somehow unique and that the Company's size alone merits a higher return. As I have stated earlier, Mr. Bourassa's size arguments completely ignore the fact that Gold Canyon is owned entirely by Algonquin Power Income Fund, a publicly traded entity that is essentially a large utility holding company that has access to the capital markets.

Q. Have you read the paper authored by Professor Eugene F. Fama, of the University of Chicago and Professor Kenneth R. French of Dartmouth College ("Fama and French") that Mr. Bourassa cites on page 30 of his rebuttal testimony?

A.

Α.

Yes.

Q. Does the Fama and French article provide any new empirical evidence that supports Mr. Bourassa's contention that the CAPM is flawed?

Summer 2004 edition of <u>Journal of Economic Perspectives</u> with another paper on CAPM that was authored by Harvard Professor Andre F. Perold.

Not at all. This particular Fama and French paper was published in the

The two articles were selected to commemorate the fortieth anniversary of the CAPM as a stock valuation methodology. Both articles highlight the well-established pros and cons of the model that have been debated since the late 1970's. The Fama and French article is noteworthy only because it revisits some of the same arguments that Fama and French originally advanced in a 1992 paper that set off the latter of two academic debates on the Sharpe Lintner version of the CAPM used in my analysis. Fama and French published their 1992 paper two years after William Sharpe shared the Nobel Prize in economics for his work in developing the CAPM. The conclusions published in the 1992 Fama and French paper were vigorously debated by a number of other noted scholars in the field of finance who essentially pulled the rug out from under a faction of Fama and French followers that proclaimed that "beta is dead" as a result of the 1992 paper⁵. Dr. Roger Morin, another academic and cost of capital witness cited often by Mr. Bourassa, summed up the debate by paraphrasing American humorist Mark Twain on page 71 of his 1994 text, Regulatory Finance: Utilities' Cost of Capital, by stating that "the autopsy of beta was premature and reports of beta's death were greatly exaggerated." Even Fama and French recognized in their 2004 paper, that four decades after its introduction "the CAPM is still widely used in applications, such as estimating the cost of capital for firms and evaluating the performance of managed portfolios. It is the centerpiece of MBA

⁵ Parcell, David C. <u>The Cost of Capital – A Practitioner's Guide</u>, 1997: 6-5 thru 6-13.

investment courses. Indeed, it is often the only asset pricing model taught in these courses."

Is the Company's cost of capital witness correct in his criticism of CAPM?

Q.

A. I believe his argument is unwarranted and outdated. While it is true that the use of CAPM in rate case proceedings first came under fire twenty-five years ago, that hasn't stopped cost of capital practitioners from using the model or public utility commissions from accepting the model's results. Although I have always used CAPM in a supporting role, both at RUCO and at the ACC, two other expert witnesses (both of whom are Ph.D.'s) that filed testimony in recent Arizona-American cases⁶ have chosen to use CAPM as their primary method for estimating their recommended costs of equity.

Q.

recommended costs of equity, which are generally derived from the DCF?

A. I have in some cases. However, for the most part, I consider the results obtained from CAPM in the same way that I consider other information on the economy and the water utility industry. If the Company's witness were to review copies of prior testimony I have filed with the ACC, he would find that for the most part I have relied on my DCF results, even when my CAPM analyses, using both the arithmetic and the geometric means,

Do you ever allow the results of your CAPM analysis to influence your final

⁶ Docket No.'s W-01303A-05-0405 and WS-01303A-06-0014.

produced lower estimates. The main reason for this is that I believe that stock prices, which are included in the DCF model, take into account the information that is reflected in the expected returns produced by the CAPM.

Q. Please explain why Mr. Bourassa's statement regarding the use of a geometric mean in your CAPM analysis as being incorrect is unfounded.

A. As I stated in my direct testimony there is an on-going debate as to which is the better average to rely on. The best argument in favor of the geometric mean is that it provides a truer picture of the effects of compounding on the value of an investment when return variability exists. This is particularly relevant in the case of the return on the stock market, which has had its share of ups and downs over the 1926 to 2004

Q. Can you provide an example to illustrate the differences between the two averages?

observation period used in my CAPM analysis.

 Yes. The following example may help. Suppose you invest \$100 and realize a 20.0 percent return over the course of a year. So at the end of year 1, your original \$100 investment is now worth \$120. Now lets say that over the course of a second year you are not as fortunate and the value of your investment falls by 20.0 percent. As a result of this, the \$120 value of your original \$100 investment falls to \$96. An arithmetic

mean of the return on your investment over the two-year period is zero percent calculated as follows:

(year 1 return + year 2 return) ÷ number of periods =
$$(20.0\% + -20.0\%) \div 2 =$$
$$(0.0\%) \div 2 = 0.0\%$$

The arithmetic mean calculated above would lead you to believe that you didn't gain or lose anything over the two-year investment period and that your original \$100 investment is still worth \$100. But in reality, your original \$100 investment is only worth \$96. A geometric mean on the other hand calculates a compound return of negative 2.02 percent as follows:

(year 2 value ÷ original value)^{1/number of periods} - 1 =
$$(\$96 \div \$100)^{1/2} - 1 =$$

$$(0.96)^{1/2} - 1 =$$

$$(0.9798) - 1 =$$

$$-0.0202 = -2.02\%$$

So the geometric mean calculation illustrated above provides a truer picture of what happened to your original \$100 over the two-year investment period.

As can be seen in the preceding example, in a situation where return variability exists, a geometric mean will always be lower than an arithmetic mean, which probably explains why utility consultants typically put up a strenuous argument against the use of a geometric mean.

Q. Can you cite any other evidence that supports your use of both a geometric and an arithmetic mean?

A. Yes. In the third edition of their book, <u>Valuation: Measuring and Managing the Value of Companies</u>, authors Tom Copeland, Tim Koller and Jack Murrin ("CKM") make the point that, while the arithmetic mean has been regarded as being more forward looking in determining market risk premiums, a true market risk premium may lie somewhere between the arithmetic and geometric averages published in Ibbotson's SBBI yearbook.

Q. Please explain.

A. In order to believe that the results produced by the arithmetic mean are appropriate, you have to believe that each return possibility included in the calculation is an independent draw. However, research conducted by CKM demonstrates that year-to-year returns are not independent and are actually autocorrelated (i.e. a relationship that exists between two or more returns, such that when one return changes, the other, or others, also change), meaning that the arithmetic mean has less credence. CKM also

explain two other factors that would make the Ibbotson arithmetic mean too high. The first factor deals with the holding period. The arithmetic mean depends on the length of the holding period and there is no "law" that says that holding periods of one year are the "correct" measure. When longer periods (e.g. 2 years, 3 years etc.) are observed, the arithmetic mean drops about 100 basis points. The second factor deals with a situation known as survivor bias. According to CKM, this is a welldocumented problem with the Ibbotson historical return series in that it only measures the returns of successful firms. That is, those firms that are listed on stock exchanges. The Ibbotson historical return series does not measure the failures, of which there are many. Therefore, the return expectations in the future are likely to be lower than the Ibbotson historical averages. After conducting their analysis, CKM conclude that 4.0 percent to 5.5 percent is a reasonable forward looking market risk premium. Adding the current 5-year Treasury yield of 4.9 percent to these two estimates indicate a cost of equtiy of 8.9 percent to 10.4 percent. Given the fact that utilities generally exhibit less risk than industrials, a return in the low end of this range is reasonable.

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- Q. Should any of Mr. Bourassa's testimony that restates your CAPM results be given any weight?
- A. No. Simply put, Mr. Bourassa wants to have it both ways in regard to CAPM in this case. First he fails to conduct a CAPM analysis in his direct

testimony. In his rebuttal testimony he attacks RUCO and ACC Staff's practice of using the betas of publicly traded water utilities and the concept of beta in general (which is the cornerstone of CAPM theory). Then, after presenting a number of reasons why he believes that the CAPM model is problematic, he develops his own set of inputs, along with the calculated beta that I have used, and then plugs them into the same CAPM model that he described on page 30 of his rebuttal as "flawed." In short he wants the Commission to accept the results of a model that he doesn't even believe in when his inputs in that model produce results that justify his recommended cost of common equity.

- Q. Has any of the rebuttal testimony presented by Gold Canyon's witnesses convinced you to make any upward adjustments to your revised recommended cost of common equity?
- 15 A.

- Q. Does your silence on any of the issues or positions addressed in the rebuttal testimony of the Company's witnesses constitute acceptance?
- 19 A. No, it does not.

No.

- Q. Does this conclude your surrebuttal testimony on Gold Canyon?
- 22 A. Yes, it does.



Investors have turned their backs on water utility stocks in recent months, sending the perennial market underperforming Water Utilities Industry plummeting to the lower levels of the *Value Line* investment universe for Timeliness. The group is now ranked 94th out of 97 industries, based on our momentum-based ranking system.

Ironically, we think that the industry's fundamentals are actually better than they've been in years and that the recent pullback was merely a market correction. Indeed, more normal weather conditions, a better regulatory environment, and heavy consolidation augur well for the near-term profitability of most of the issues covered in the next few pages.

That said, we remain concerned about the industry's long-term prospects. Although the aforementioned changes should boost profits in the coming six to 12 months, escalating infrastructure costs are still threatening the industry's longer-term earnings potential. As a result, not a single issue in this industry holds much 3- to 5-year appreciation potential, despite the recent selloff. Making matters worse, none stand out for income appeal any longer, given that there are better yield opportunities out there now.

Near-Term Outlook

Water utility companies have struggled with unfavorably wet weather and an unfriendly regulatory environment for the lion's share of the past couple of years. However, both look to be on the mend. Although we obviously cannot predict the weather, recent results point to a return to more normalized conditions going forward. Meanwhile, regulatory bodies, which are designed to maintain a balance of power between consumers and providers, have been handing down more favorable and more timely case rulings of late in most instances. For example, the California Public Utilities Commission, long an adversary of Cal-based utilities, has undergone a personnel metamorphosis and, subsequently, has changed its tune. This is extremely good news for utility companies as they typically file a few general rate cases each year requesting a step up in rates.

Longer-term Concerns

Increasingly more rigorous Environmental Protection Agency (EPA) regulatory laws on pipeline and well

Composite Statistics: Water Utility Industry							
2002	2003	2004	2005	2006	2007		09-11
925.2	1030.0	1173.6	1256.9	1370	1485	Revenues (\$mill)	1825
107.8	112.6	105.7	148.3	165	185	Net Profit (\$mill)	255
38.6%	39.7%	39.1%	39.0%	39.0%	39.0%	Income Tax Rate	39.0%
				Nil	Nil	AFUDC % to Net Profit	Nil
54.1%	51.0%	49.1%	52.0%	51.0%	50.0%	Long-Term Debt Ratio	50.0%
45.7%	48.8%	50.7%	48.0%	49.0%	50.0%	Common Equity Ratio	50.0%
2116.4	2449.1	2785.6	3057.5	3300	3565	Total Capital (\$mill)	4575
2955.1	3405.6	3836.9	4194.7	4500	4740	Net Plant (\$mill)	5675
6.9%	5.9%	6.0%	7.0%	7.5%	8.0%	Return on Total Cap'l	8.5%
11.1%	8.8%	9.0%	9.8%	10.0%	10.5%	Return on Shr. Equity	11.0%
11.1%	8.8%	9.0%	9.8%	10.0%	10.5%	Return on Com Equity	11.0%
4.0%	2.7%	3.1%	3.7%	4.0%	4.5%	Retained to Com Eq	5.0%
64%	70%	66%	63%	60%	55%	All Div'ds to Net Prof	55%
21.6	25.6	25.4		Dold fi		Avg Ann'l P/E Ratio	18.0
1.18	1.46	1.34		Bold figures are Value Line estimates		Relative P/E Ratio	1.20
3.0%	2.7%	2.6%				Avg Ann'l Div'd Yield	2.5%

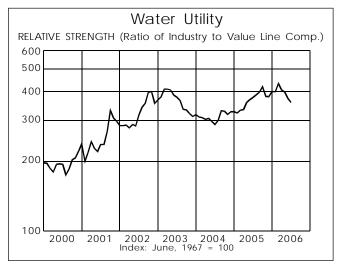
INDUSTRY TIMELINESS: 94 (of 97)

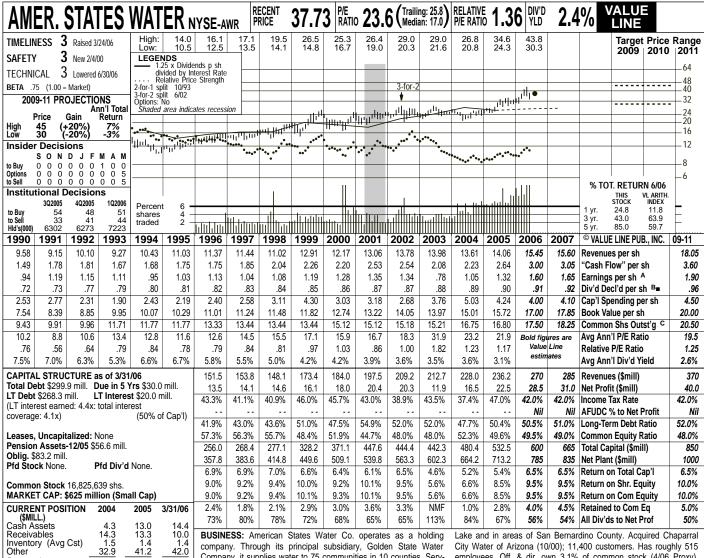
infrastructures will probably make it difficult for water utility companies to maintain the earnings momentum that we anticipate this year out to late decade. Current infrastructures are well over 100 years old in many cases and require maintenance, if not significant rebuilding. Even worse, the agency is stepping up drinking water purification standards in light of the political angst currently afflicting the world. In fact, infrastructure repair costs are expected to climb to the hundreds of millions of dollars over the next two decades. With this in mind, it is likely that capital expenditures will continue to rise over the next couple of years. However, many of the smaller water companies lack the capital to undergo these initiatives and are being forced to shop their businesses to larger suitors. Many of these bigger companies, though, with the means to meet these higher costs, have been using the weakness to improve their operations and increase their presence. Aqua America, the largest water utility in our Survey, for example, has been on a major buying spree recently, making more than 100 acquisitions in the past five years. It has drastically increased its customer base and clearly improved its longer-term prospects. It, therefore, holds the best 3- to 5-year appreciation potential of the all the stocks in this industry.

Investment Advice

We recommend that most investors avoid the issues in the Water Utilities Industry. Not one is timely or holds above-average 3- to 5-year appreciation potential. Although the industry has long been a haven for incomeminded investors, such is no longer the case. Higher interest-rates have increased the income-producing appeal of alternative investments, making the yields found in this industry modestly appealing at best. On that note, we think that the only issue that may stand out at this juncture is California Water. Its 2 Safety rank, coupled with its historically steady stream of income, may appeal to more-conservative investors. Nevertheless, we recommend that potential investors take a more in-depth look at the individual reports of each company before making a financial commitment.

Andre J. Costanza





company. Through its principal subsidiary, Golden State Water Company, it supplies water to 75 communities in 10 counties. Service areas include the greater metropolitan areas of Los Angeles and Orange Counties. The company also provides electric utility services to approximately 23,000 customers in the city of Big Bear

We have raised our 2006 share-net es-

rate relief, the CPUC is showing signs of

being more business friendly in recent months. Indeed, the board has been

redesigned and now looks to be handing

City Water of Arizona (10/00); 11,400 customers. Has roughly 515 employees. Off. & dir. own 3.1% of common stock (4/06 Proxy). Chairman: Lloyd Ross. President & CEO: Floyd Wicks. Incorporated: CA. Add.: 630 East Foothill Boulevard, San Dimas, CA 91773. Tel.: 909-394-3600. Web: www.aswater.com

timate for American States Water by ANNUAL RATES Past Past Est'd '03-'05 **\$0.15, to \$1.60.** Although \$0.11 of the in-10 Yrs. to '09-'11 of change (per sh) 5 Yrs. crease is attributable to a better-than-Revenues "Cash Flow 3.0% 3.0% 1.5% 3.5% 4.5% 3.0% expected first quarter, we have also raised -2.5% 1.0% 4.5% 1.0% Earnings Dividends our second-half estimate by roughly a 1.0% nickel. Usage rates for water are rising. **Book Value** 4.0% 4.5% 5.0% We suspect that this trend will continue as QUARTERLY REVENUES (\$ mill.) Cal-Full the year progresses and weather patterns Mar.31 Jun. 30 Sep. 30 Dec. 31 endar Year take a more normal shape. Water con-2003 sumption levels declined about 4% in 2005 2004 46.7 59.3 69.0 53.0 228.0 because of unusually rainy conditions. Meanwhile, we are also encouraged by 2005 49.8 60.5 68.1 236. 57.8 2006 60.6 68.0 77.0 recent changes to the California Public 2007 73.0 81.0 68.0 285 Utilities Commission (CPUC). Long a EARNINGS PER SHARE A Cal-Full nemesis to utility companies looking for Mar.31 Jun. 30 Sep. 30 Dec. 31 endar Year

68.9

19.7 27.6

77.6

325%

18.2 45.9

86.3

246%

67.8

20.0 31.6

80.4

335%

down more timely and favorable rulings. This is a major boon for AWR. Still, we look for earnings growth to slow in 2007. Despite the improving regulatory backdrop, we remain extremely concerned about elevated infrastructure costs, given the state of the company's water systems. Indeed, EPA demands for water

quality will likely only grow more stringent with time. Unfortunately, AWR does not have the means to fund many of these changes internally and will likely have to look to equity and debt markets in order to do so. Such undertakings will likely cause earnings growth to slow considerably in 2007 and to late decade, as well as preclude the company from participating in the attractive acquisition market. We estimate earnings of \$1.65 a share in 2007.

We think that most investors would be better served to look elsewhere. Although untimely AWR shares tumbled roughly 10% since our April report, their 3- to 5-year total-return potential is unexciting, given the concerns we have about infrastructure costs. In fact, the stock is trading within our 2009-2011 Target Price Range. Meanwhile, there are better income vehicles out there at this time. It should be noted, however, that the company's foray into military bases is paying off. Continued progression in this area could be accretive to our current 2009-2011 projections.

(C) In millions, adjusted for splits.

Andre J. Costanza July 28, 2006

(A) Primary earnings. Excludes nonrecurring gains: '91, 73¢; '92, 13¢; '04, 14¢; '05, 25¢. Quarterly earnings may not sum due to change in share count. Next earnings report due early

Current Assets

Accts Payable Debt Due

Current Liab.

Fix. Chg. Cov.

2003

2004

2005

2006

2007

Cal-

endar

2002

2003

2004

2005

2006

.20

.08

.22

.35

.217

.221

.221

.225

.225

.19

.30

.34

.38

.217

.221

.221

.225

.225

QUARTERLY DIVIDENDS PAID B.

Mar.31 Jun.30 Sep.30 Dec.31

.51

.52

.47

.55

.217

.221

.221

d.12

.15

.29

.32

.221

1.05

1.32

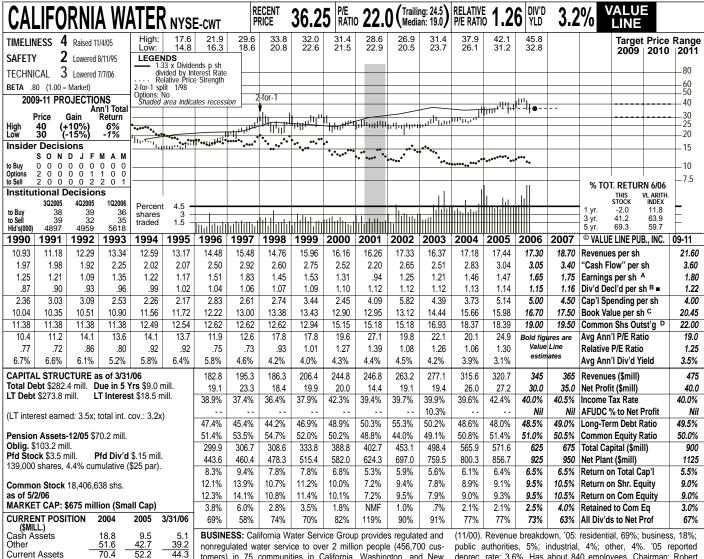
1.60

Full

.88

August.
(B) Dividends historically paid in early March, June, September, December. Div'd reinvestment plan available.

Company's Financial Strength Stock's Price Stability B++ 80 Price Growth Persistence **Earnings Predictability** 60



nonregulated water service to over 2 million people (456,700 customers) in 75 communities in California, Washington, and New Mexico. Main service areas: San Francisco Bay area, Sacramento Valley, Salinas Valley, San Joaquin Valley & parts of Los Angeles. Acquired National Utility Company (5/04); Rio Grande Corp.

California Water Service Group looks

to be dealing with a more favorable

regulatory administration. In the past,

public authorities, 5%; industrial, 4%; other, 4%. '05 reported deprec. rate: 3.6%. Has about 840 employees. Chairman: Robert W. Foy. President & CEO: Peter C. Nelson. Inc.: Delaware. Address: 1720 North First Street, San Jose, California 95112-4598. Telephone: 408-367-8200. Internet: www.calwater.com

338% 361% 370% Fix. Chg. Cov ANNUAL RATES Past Est'd '03-'05 Past to '09-'11 of change (per sh) 10 Yrs. 5 Yrs. 3.0% 2.5% 2.0% -0.5% 3.5% 4.5% Revenues "Cash Flow" Earnings Dividends 0.5% 1.5% -4.0% 4.5% 1.0% **Book Value** 2.5% 5.0%

19.8

57.2

36.1

39.6

76.8

28.9

44.8

82.3

Accts Payable Debt Due

Current Liab.

Other

Cal-	QUAR	Full			
endar	Mar.31	Year			
2003	51.3	68.0	88.2	69.6	277.1
2004	60.2	88.9	97.1	69.4	315.6
2005	60.3	81.5	101.1	77.8	320.7
2006	65.2	94.8	105	80.0	345
2007	70.0	100	110	85.0	365
Cal-	EAF	RNINGS PE	R SHARE	A E	Full
endar	Mar.31	Jun.30	Sep.30	Dec.31	Year
2003 2004 2005 2006 2007	d.05 .08 .03 .04 .08	.30 .59 .41 .56	.53 .59 .71 . 72 . 74	.41 .20 .32 . 33	1.21 1.46 1.47 1.65 1.75
Cal-	QUART	Full			
endar	Mar.31	Year			
2002 2003 2004 2005 2006	.28 .281 .283 .285 .2875	.28 .281 .283 .285 .2875	.28 .281 .283 .285	.28 .281 .283 .285	1.12 1.12 1.13 1.14

(A) Basic EPS. Excl. nonrecurring gain (loss): '00, (7¢); '01, 4¢; 02, 8¢. Next earnings report

(B) Dividends historically paid in mid-Feb., May, Aug., and Nov. ■ Div'd reinvestment plan

ings advance this year.

Infrastructure costs

the California Public Utilities Commission (CPUC), which is in charge of supervising local utilities, was not very friendly to those seeking rate relief. Indeed, decisions were typically unfavorable compared to other states and, in many cases, delayed. However, since taking office, Governor Schwarzenegger has made it a priority to correct the regulatory environment. Personnel changes made under his tenure have improved the climate for rates of return, and significantly cleared the backlog of cases pending decisions. This is obviously a positive development for CWT, which files a general rate case (GRC) each year for eight of its 24 districts. It is currently waiting for a ruling on its 2005 GRC, requesting about \$11 million, assuming a 12.23% return on equity. Meanwhile, the commission has also ruled that utilities could recover costs tracked in balancing accounts without having to pass an earnings test. We look for a double-digit earn-

will

remain a thorn in the company's side going forward, though. The costs of maintaining well and pipeline infrastructures continue to rise due to the growing demands of the EPA for drinking water standards. However, CWT does not currently have the means to continuously meet these expenses and will likely have to look to equity and debt markets to foot the bill. Meanwhile, we our also concerned that the financial burden will prevent CWT from taking advantage of the highly fragmented industry and making acquisitions. Therefore, we look for bottom-line growth to moderate considerably in 2007 and thereafter out to late decade.

Most investors will want to take a pass on these untimely shares. Indeed, they still hold below-average 3- to 5-year appreciation potential, despite about a 25% slide in price since our April review. (Business appears to be fine, although the stock got ahead of itself.) Dividend growth is likely to be slow but steady. However, the current yield doesn't especially stand out. Income-minded investors have better alternatives to choose from. Andre J. Costanza

July 28, 2006

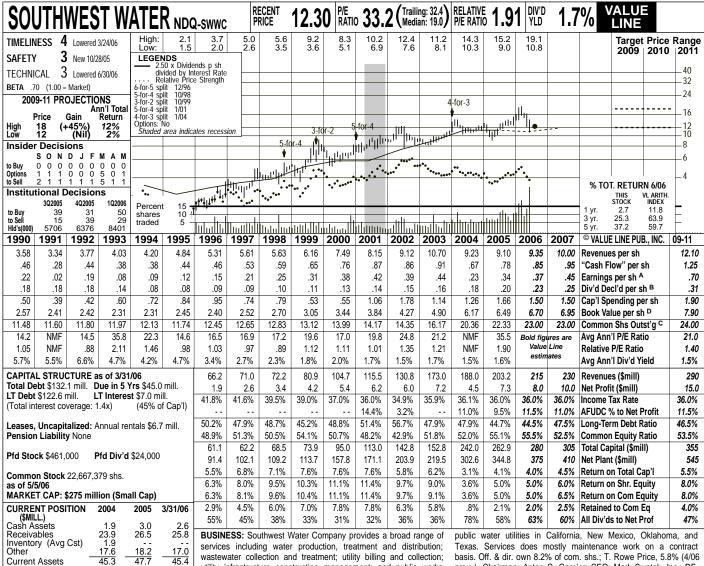
(C) Incl. deferred charges. In '05: \$63.9 mill., \$3.47/sh.

(D) In millions, adjusted for split.

probably

Company's Financial Strength Stock's Price Stability B++ 85 Price Growth Persistence **Earnings Predictability** 65

(E) May not total due to change in shares. © 2006, Value Line Publishing, Inc. All rights reserved. Factual material is obtained from sources believed to be reliable and is provided without warranties of any kind. THE PUBLISHER IS NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS HEREIN. This publication is strictly for subscriber's own, non-commercial, internal use. No part of it may be reproduced, resold, stored or transmitted in any printed, electronic or other form, or used for generating or marketing any printed or electronic publication, service or product



wastewater collection and treatment; utility billing and collection; utility infrastructure construction management; and public works services. It operates out of two groups, Utility (39% of 2005 revenues) and Services (61%). Utility owns and manages rate-regulated basis. Off. & dir. own 8.2% of com. shs.; T. Rowe Price, 5.8% (4/06 proxy). Chairman: Anton C. Garnier; CEO: Mark Swatek. Inc.: DE. Addr.: One Wilshire Building, 624 S. Gramd Avemie. Ste. 2900, Los Angeles, CA 90017. Tel.: 213-929-1800. Internet: www.swwc.com.

Past ANNUAL RATES Past Est'd '03-'05 5 Yrs. of change (per sh) to '09-'11 8.5% 7.0% 8.5% 3.5% 1.5% Revenues "Cash Flow" 4.0% 8.0% Earnings 13.5% 12 0% 10.0% 14.0% 9.0% 5.0% Dividends Book Value

12.3 3.4

35.7

10.0

40.6

45.4

6.7 9.5

35.8

Current Assets

Accts Payable Debt Due

Current Liab.

Cal- endar	QUAR Mar.31	Full Year			
2003 2004 2005 2006 2007	36.1 39.8 45.2 50.8 54.0	51.3 55.0	55.0	47.5	173.0 188.0 203.2 215 230
Cal- endar			ER SHARE Sep. 30		Full Year
2003 2004 2005 2006 2007	d.01 d.01 .03 .04	.13 .13 .15 . 12 . 15	.21 .12 .14 . 15	.11 d.02 .06 .07 .10	.44 .23 .34 .37 . 45
Cal- endar	QUAR Mar.31		/IDENDS P Sep.30		Full Year
2002 2003 2004 2005 2006	.038 .042 .046 .048 .052	.038 .042 .046 .048 .052	.042 .046 .048	.046 .050	.15 .17 .19 .20

Southwest Water Company is struggling. First-quarter share net was a penny above our estimate, but the outperformance was fleeting. Management revised down its full-year share earnings estimate; accordingly, we have reduced our 2006 assessment by \$0.05 (12%).

Changes on the regulatory front in California should fuel profit growth at the Utility Group in the coming years. Profitability for a water utility is largely dependent on state commissions. The commission determines the return on investment for a utility based on its operating costs and capital expenditures made to maintain the underlying infrastructure. California Governor Schwarzenegger nominated two candidates to fill vacant spots on the California Public Utilities Commission (CPUC) early last year. Until recently, return on investments allowed by the CPUC had been below those of many other states. With the regulatory situation improved, Southwest is seeking an 11% return on equity in its latest filing with the CPUC, compared to the current allowed return of 9.8%.

Increased costs are hurting the Serv-

\$1.61/share.

ices Group. Margins have been spread thin here over the last few quarters, and during the March interim the business fell back into the red. While the recently acquired (in 2005) Alabama wastewater system has helped increase revenues, fixed costs have expanded at an equivalent rate. Services operates approximately 730 vehicles, which drive 18 million miles an-Services nually. Higher gasoline costs have offset much of the top-line gains in this segment. However, management anticipates it will be able to shrink the cost base with improved contract pricing over the next several months.

Desalination technologies provide another avenue of growth. The United States has been slow to adopt desalination as a way to boost water supply. However, saltwater intrusion into many coastal states may well make this technology compelling for many cities. Southwest stands to benefit from any shift towards desalination, given its experience in the field.

Nonetheless, this untimely stock has limited appreciation potential, based on its current quotation.

Praneeth Satish July 28, 2006

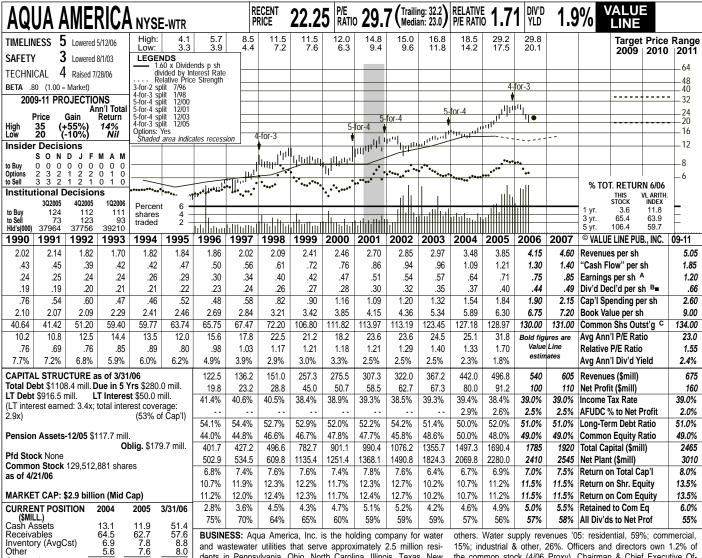
(A) Diluted earnings. Excludes nonrecurring gains (losses): '00, (3¢); '01, (5¢); '02, 1¢; '05, (23¢). Next earnings report due early August.

April, July, and October. (C) In millions, adjusted for splits.

(B) Dividends historically paid in late January, (D) Includes intangibles. In 2005: \$35.9 million,

Company's Financial Strength Stock's Price Stability В 75 Price Growth Persistence 100 **Earnings Predictability** 55

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dents in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Florida, Indiana, and five other states. Divested three of four non-water businesses in '91; telemarketing group in '93; and others. Acquired AquaSource, 7/03; Consumers Water, 4/99; and

the common stock (4/06 Proxy). Chairman & Chief Executive Officer: Nicholas DeBenedictis. Incorporated: Pennsylvania. Address: 762 West Lancaster Avenue, Bryn Mawr, Pennsylvania 19010. Telephone: 610-525-1400. Internet: www.aquaamerica.com.

8.5% 6.5% 11.0% 10.0% Earnings Dividends 9.0% **Book Value** 9.5% 11.0% 7.0% QUARTERLY REVENUES (\$ mill.) Cal-Full Mar.31 Jun.30 Sep.30 Dec.31 endar Year 2003 83.4 102.1 367.2 2004 99.8 106.5 120.3 115.4 442.0 2005 114.0 123.1 136.8 122.9 496.8 145 142.1 2006 117.9 135 540 605 2007 135 150 165 155 EARNINGS PER SHARE A Full Cal-Mar.31 Jun.30 Sep.30 Dec.31 endar Year 2003 .11 .18 2004 .14 .20 .17 .64 .13 2005 .15 .17 .22 .17 .71 2006 .13 .17 .25 .20 .75 2007 .19 QUARTERLY DIVIDENDS PAID B = Cal-Full Mar.31 Jun.30 Sep.30 Dec.31 endar 2002 .32 .08 .08 .08 .084

.084

.09

.098

.09

.098

.108

.37

90.1

23.5 135.3

217.4

364%

Past

10 Yrs.

7.0% 9.5%

90.0

55.5 163.1

263.3

377%

5 Yrs.

8.0% 9.5%

Past Est'd '03-'05

to '09-'11

7.0% 9.0%

125.8

29.9 191.9

268.5

284%

Current Assets

Accts Payable Debt Due

Fix. Chg. Cov.

of change (per sh)

Revenues "Cash Flow

ANNUAL RATES

Other Current Liab.

2003

2004

2005

2006

.084

.09

.098

.108

Agua America is suffering from regu**latory lag.** First-quarter share net was \$0.13, a bit below our estimate, and revenues, too, fell slightly (2%) short of our tally. The water utilities giant is being hurt by high fuel costs and unfavorable timing of its rate cases. The company is awaiting judgment on over \$50 million of annual rate hikes. The stock has come under increasing pressure since management announced first-half earnings growth in 2006 would be below historical averages. Therefore, we suspect profit growth this year will be confined to the latter two quarters. Accordingly, earnings comparisons should turn positive by the September interim. Aqua announced in June that a rate case settlement was approved in Pennsylvania. The win will augment annual revenue by about \$25 million, a 9.2% increase over current rates in the state. The new rates should take effect in time to support third-quarter revenue growth.

The acquisition of New York Water Service should further top-line advances in 2007. The system would cost \$51 million and enhance Aqua's total customer count by 135,000 (5%). As well, it

ought to contribute roughly \$0.02 a share to the bottom line beginning in 2007. Aqua already supplies water to New York, but because New York Water Service does not encroach on any existing infrastructure, cannibalization should be minimal. New York will become Aqua's seventh-largest state when the deal closes later this year. The company's growth strategy, for the most part, centers around acquisitions. The highly fragmented nature of the water industry facilitates industry consolidation by big players like Aqua. Many of the smaller water utilities are run less efficiently than Aqua's divisions; it is their capacity for improvement that make them good targets for acquisition. The company's most recent purchase was a troubled water system in North Carolina, bringing the total number of transactions closed this year to 10. We expect another five deals to close by yearend.

This stock is ranked 5 (Lowest) for year-ahead performance. Despite a recent price drop, Aqua is still trading at a hefty premium. Moreover, the water utility sector seems to be cooling down. Praneeth Satish

July 28, 2006

(A) Primary shares outstanding through '96; diluted thereafter. Excl. nonrec. gains (losses): '90, (38¢); '91, (34¢); '92, (38¢); '99, (11¢); '00, 2¢; '01, 2¢; '02, 5¢; '03, 4¢. Excl. gain from

.084

.09

.098

.108

disc. operations: '96, 2¢. Next earnings report due early August. (B) Dividends historically paid in early March, June, Sept. & Dec. ■ Div'd. reinvestment plan available (5% discount).

Company's Financial Strength Stock's Price Stability B+ 85 Price Growth Persistence **Earnings Predictability** 100





AMERICAN STS WTR CO (NYSE)

Scottrade No Fee IRAs

AWR

37.72

-0.20

(-0.53%)Vol. 59,300

14:58 CST

American States is a public utility company engaged principally in thepurchase, production, distribution and sale of water. The company also distributes electricity in some communities. In the customer service areas for both water and electric, rates and operations are subject to the jurisdiction of the California Public Utilities Commission.

General Information

AMER STATES WTR

630 East Foothill Boulevard San Dimas, CA 91773

Phone: 909 394-3600 Fax: 909 394-0711

Web: www.aswater.com

Email: investorinfo@aswater.com

Industry

UTIL-WATER

Sector:

SPLY Utilities

Fiscal Year End

December

Last Reported Quarter Next EPS Date

06/30/06 08/09/2006

Price and Volume Information

Zacks Rank	12
Yesterday's Close	37.92
52 Week High	42.39
52 Week Low	28.34
Beta	0.18
20 Day Moving Average	102,870.00
Target Price Consensus	46



% Price Change

4 Week 12 Week

% Price Change Relative to S&P 500 8.08 4 Week

7.30

-7.5112 Week

-4.16

YTD		25.10	YTD		21.19
Share Information			Dividend Inform	ation	
Shares Outstanding (millions)		16.83	Dividend Yield		2.34%
Market Capitalization			Annual Dividend		\$0.90
(millions)		648.31			0.00
Short Ratio		7.55	Change in Payout		0.00
Last Split Date		06/10/2002	Last Dividend Pay	out / Amount 05/11	/2006 / \$0.22
EPS Information			Canasaus Da		
Current Quarter EPS Conse	neue Eetir	mate 0,40		commendations Buy, 5=Strong Sell)	2.00
Current Year EPS Consensu				buy, 5-Strong Sell)	2.00
Estimated Long-Term EPS (60 Days Ago		3.00
Next EPS Report Date	0107111111	08/09/2006	90 Days Ago		3.00
		00,007000	oo bayongo		0.00
Fundamental Ratios					
P/E		EPS Growth		Sales Growth	
Current FY Estimate:		vs. Previous Year		vs. Previous Year	21.73%
Trailing 12 Months:		vs. Previous Quar	ter -6.67%	vs. Previous Quarter:	4.80%
PEG Ratio	4.27				
Price Ratios		ROE		ROA	
Price/Book	2.45	06/30/06	_	06/30/06	Colorador de la colorador de l
Price/Cash Flow	13.31	03/31/06	8.97	03/31/06	2.73
Price / Sales	-	12/31/05	8.54	12/31/05	2.62
Current Ratio		Quick Ratio	/	Operating Margin	
06/30/06	-	06/30/06	-	06/30/06	-
03/31/06	0.84	03/31/06	0.83	03/31/06	9.51
12/31/05	0.89	12/31/05	0.87	12/31/05	9.33
Net Margin		Pre-Tax Margin		Book Value	
06/30/06	-	06/30/06	-	06/30/06	-
03/31/06	20.77	03/31/06	20.77	03/31/06	15.89
12/31/05	20.53	12/31/05	20.53	12/31/05	15.73
Inventory Turnover		Debt-to-Equity		Debt to Captial	
06/30/06	-	06/30/06	-	06/30/06	-
03/31/06	63.44	03/31/06	1.00	03/31/06	50.11

12/31/05

61.40 12/31/05

1.02 12/31/05

50.40



CALIFORNIA WTR SVC GROUP (NYSE)

Scottrade No Fee IRAs

CWT

34.76

▼-0.43

(-1.22%)

Vol. 43,900

15:02 CST

California Water Service Company's business, which is carried on through its operating subsidiaries, consists of the production, purchase, storage, purification, distribution and sale of water for domestic, industrial, public and irrigation uses, and for fire protection. It also provides water related services under agreements with municipalities and other private companies. The nonregulated services include full water system operation, and billing and meter reading services.

General Information

CALIF WATER SVC

1720 North First Street

San Jose, CA 95112 Phone: 408 367-8200

Fax: 408 437-9185

Web: www.calwatergroup.com Email: klichtenberg@calwater.com

Industry

UTIL-WATER

SPLY

Sector:

Utilities

Fiscal Year End

December

Last Reported Quarter

06/30/06

Next EPS Date

10/25/2006

Price and Volume Information

Zacks Rank	12
Yesterday's Close	35.19
52 Week High	45.36
52 Week Low	32.64
Beta	0.47
20 Day Moving Average	57,100.00
Target Price Consensus	44.5

% Price Change

4 Week



% Price Change Relative to S&P 500

0.67 4 Week -0.05

12 Week		-13.36	12 Week			-10.22
YTD		-5.89	YTD			-3.41
Share Information			Dividend Informa	ation		
Shares Outstanding		18.41	Dividend Yield			3.20%
(millions)		10.41	Annual Dividend			\$1.15
Market Capitalization (millions)		662.28	Payout Ratio			0.00
Short Ratio		11.57	Change in Payout	Ratio		0.00
Last Split Date		01/26/1998	Last Dividend Pay	out / Amount	05/04/2006	\$0.29
EPS Information			Consensus Re	commendation	IS	
Current Quarter EPS Cons	sensus Estir	nate 0.74	Current (1=Strong	Buy, 5=Strong Se	ell)	2.33
Current Year EPS Conser	sus Estimat	te 1.60	30 Days Ago			2.33
Estimated Long-Term EPS	Growth Ra	9.00	60 Days Ago			2.33
Next EPS Report Date		10/25/2006	90 Days Ago			2.60
Fundamental Ratios						
P/E		EPS Growth		Salas Crawth		
Current FY Estimate:	21.70	vs. Previous Year	_0/_	Sales Growth vs. Previous Yea	ar	0.43%
Trailing 12 Months:		vs. Previous Quart		vs. Previous Qu		4.36%
PEG Ratio	2.41	vo. i rovious Quare	070.0070	vo. 1 10 110 us Qui	artor. 2	.4.50 /6
Price Ratios		ROE		DOA		
Price/Book	2.25	06/30/06		ROA 06/30/06		
Price/Cash Flow	11.83			03/31/06		2.78
Price / Sales	2.04	12/31/05		12/31/05		2.70
	2.07		3.41			2.00
Current Ratio 06/30/06		Quick Ratio		Operating Mar	gin	
03/31/06	0.54	00/00/00		06/30/06		0.44
12/31/05	0.54	03/31/06 12/31/05		03/31/06		8.41
	0.00		0.63	12/31/05		8.49
Net Margin		Pre-Tax Margin		Book Value		
06/30/06	- 0.40	06/30/06		06/30/06		-
03/31/06	8.43	03/31/06		03/31/06		15.74
12/31/05	8.49	12/31/05	8.49	12/31/05		15.98
Inventory Turnover		Debt-to-Equity		Debt to Captial	L	
06/30/06	-	06/30/06	-	06/30/06		-

03/31/06	55.23 03/31/06	0.94 03/31/06	48.28
12/31/05	56.99 12/31/05	1.90 12/31/05	65.53



SOUTHWEST WTR CO (NASDAQ)

Scottrade No Fee IRAs

SWWC

12.98

₾ 0.25

(1.96%)

Vol. 135,822

15:07 CST

Southwest Water Company provides a broad range of utility and utility management services and serves people from coast to coast. Through its various subsidiaries, Southwest operates and manages water and wastewater treatment facilities along with providing utility submetering and billing and collection services.

General Information

SOUTHWEST WATER

One Wilshire Building 624 South Grand Avenue

Suite 2900

Los Angeles, CA 90017-3782

Phone: 213 929-1800 Fax: 213 929-1888

Web: www.southwestwater.com

Email: swwc@swwc.com

Industry

UTIL-WATER

Sector:

SPLY Utilities

Fiscal Year End Last Reported Quarter

December 06/30/06

Next EPS Date

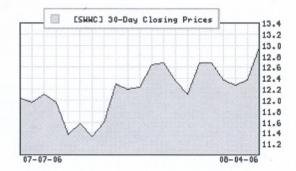
06/30/06 08/09/2006

Price and Volume Information

Zacks Rank	R
Yesterday's Close	12.73
52 Week High	19.03
52 Week Low	10.85
Beta	0.36
20 Day Moving Average	113,989.95
Target Price Consensus	N/A

% Price Change

4 Week



% Price Change Relative to S&P 500

8.19 4 Week

7.41

12 Week		-18.91	12 Week		-15.97
YTD		-9.50	YTD		-13.49
Share Information			Dividend Informa	ation	
Shares Outstanding		22.67	Dividend Yield		1.62%
(millions) Market Capitalization			Annual Dividend		\$0.21
(millions)		293.54	Payout Ratio		0.00
Short Ratio		11.99	Change in Payout		0.00
Last Split Date		12/27/2002	Last Dividend Pay	out / Amount	06/28/2006 / \$0.05
EPS Information			Consensus Re	commendatio	ns
Current Quarter EPS Con-	sensus Estir	mate 0.13	Current (1=Strong	Buy, 5=Strong S	Sell) 2.20
Current Year EPS Conser	sus Estima	te 0.38	30 Days Ago		2.20
Estimated Long-Term EPS	Growth Ra	ate 5.50	60 Days Ago		2.20
Next EPS Report Date		08/09/2006	90 Days Ago		2.00
Fundamental Ratios					
P/E		EPS Growth		Sales Growth	
Current FY Estimate:	34.08	vs. Previous Year	414.99%	vs. Previous Ye	
Trailing 12 Months:	34.47	vs. Previous Quart		vs. Previous Q	
PEG Ratio	6.20				
Price Ratios		ROE		ROA	
Price/Book	1.93	06/30/06	-	06/30/06	-
Price/Cash Flow	15.96	03/31/06	5.97	03/31/06	1.89
Price / Sales	-	12/31/05	5.46	12/31/05	1.69
Current Ratio		Quick Ratio		Operating Ma	rgin
06/30/06	-	06/30/06	-	06/30/06	-
03/31/06	1.27	03/31/06	1.27	03/31/06	3.93
12/31/05	1.18	12/31/05	1.18	12/31/05	3.51
Net Margin		Pre-Tax Margin		Book Value	
06/30/06	-	06/30/06	-	06/30/06	-
03/31/06	6.15	03/31/06	6.15	03/31/06	6.65
12/31/05	5.59	12/31/05	5.59	12/31/05	6.73
Inventory Turnover		Debt-to-Equity		Debt to Captia	al
06/30/06	-	06/30/06	-	06/30/06	-

03/31/06	- 03/31/06	0.83 03/31/06	45.14
12/31/05	24.69 12/31/05	0.81 12/31/05	44.74



AQUA AMERICA INC (NYSE)

Scottrade No Fee IRAs

WTR

22.39

v-0.62

(-2.69%)

Vol. 501,100

15:04 CST

Aqua America is the largest publicly-traded U.S.-based water utility serving residents in Pennsylvania, Ohio, Illinois, Texas, New Jersey, Indiana, Virginia, Florida, North Carolina, Maine, Missouri, New York, South Carolina and Kentucky. The company has been committed to the preservation and improvement of the environment throughout its history, which spans more than 100 years.

General Information

AQUA AMER INC

762 W. Lancaster Avenue Bryn Mawr, PA 19010-3489

Phone: 610 527-8000 Fax: 610 519-0989

Web: www.aquaamerica.com

Email: investorrelations@aquaamerica.com

Industry

UTIL-WATER SPLY

Sector: Utilities

Fiscal Year End Last Reported Quarter December

Next EPS Date

06/30/06 11/08/2006

Price and Volume Information

Zacks Rank	/B
Yesterday's Close	23.01
52 Week High	29.59
52 Week Low	20.61
Beta	0.18
20 Day Moving Average	514,905.00
Target Price Consensus	26.33



4 Week 12 Week



% Price Change Relative to S&P 500

2.28 4 Week 1.55 0.34 12 Week 3.98

YTD		-14.61	YTD			-21.46
Share Information			Dividend Informa	ation		
Shares Outstanding		131.38	Dividend Yield			1.83%
(millions)		101.00	Annual Dividend			\$0.43
Market Capitalization (millions)		3,062.56	Payout Ratio			0.00
Short Ratio		8.67	Change in Payout	Ratio		0.00
Last Split Date		12/03/2001	Last Dividend Pay	out / Amount	05/16/20	06 / \$0.11
EPS Information			Consensus Re	commendatio	ns	
Current Quarter EPS Cons	sensus Estir	mate 0.24	Current (1=Strong	Buy, 5=Strong S	Sell)	1.86
Current Year EPS Consen	sus Estima	te 0.75	30 Days Ago			1.75
Estimated Long-Term EPS	Growth Ra	ate 8.80	60 Days Ago			2.25
Next EPS Report Date		11/08/2006	90 Days Ago			2.43
Fundamental Ratios			,			
P/E		EPS Growth		Sales Growth		
Current FY Estimate:	31.67	vs. Previous Year	-1.45%	vs. Previous Ye	ear	7.03%
Trailing 12 Months:	33.90	vs. Previous Quart	ter 30.77%	vs. Previous Qu	uarter:	11.70%
PEG Ratio	3.62					
Price Ratios		ROE		ROA		
Price/Book	3.69	06/30/06		06/30/06		-
Price/Cash Flow	19.15	03/31/06	11.14	03/31/06		3.45
Price / Sales	6.01	12/31/05	11.67	12/31/05		3.66
Current Ratio		Quick Ratio	1	Operating Mar	rgin	
06/30/06	-	06/30/06	-	06/30/06		-
03/31/06	0.47	03/31/06	0.44	03/31/06		17.74
12/31/05	0.34	12/31/05	0.31	12/31/05		18.35
Net Margin		Pre-Tax Margin		Book Value		
06/30/06	-	06/30/06	-	06/30/06		-
03/31/06	28.93	03/31/06	28.93	03/31/06		6.38
12/31/05	29.81	12/31/05	29.81	12/31/05		6.31
Inventory Turnover		Debt-to-Equity		Debt to Captia	al	
06/30/06	-	06/30/06	-	06/30/06		-
03/31/06	6.25	03/31/06	1.11	03/31/06		52.69

12/31/05

0.00 12/31/05

1.08 12/31/05

52.01

GOLD CANYON SEWER COMPANY DOCKET NO. SW-02519A-06-0015 TABLE OF CONTENTS TO SURREBUTTAL SCHEDULES WAR

SURREBUTTAL SCHEDULE

WAR - 1	COST OF CAPITAL SUMMARY
WAR - 2	DCF COST OF EQUITY CAPITAL
WAR - 3	DIVIDEND YIELD CALCULATION
WAR - 4	DIVIDEND GROWTH RATE CALCULATION
WAR - 5	DIVIDEND GROWTH COMPONENTS
WAR - 6	GROWTH RATE COMPARISON
WAR - 7	CAPM COST OF EQUITY CAPITAL
WAR - 8	CAPITAL STRUCTURES OF SAMPLE COMPANIES
WAR - 9	WEIGHTED COST OF CAPITAL OF SAMPLE COMPANIES

GOLD CANYON SEWER COMPANY TEST YEAR ENDED DECEMBER 31, 2004 COST OF CAPITAL SUMMARY

DOCKET NO. SW-02519A-06-0015 SURREBUTTAL SCHEDULE WAR - 1 PAGE 1 OF 2

WEIGHTED COST OF CAPITAL

LINE NO.	DESCRIPTION	(A) CAPITAL RATIO	(B)	(C) RUCO WEIGHTED COST
1	DEBT	40.00%	8.45%	3.38%
2	PREFERRED STOCK	0.00%	0.00%	0.00%
3	COMMON EQUITY	60.00%	8.60%	5.16%
4	TOTAL CAPITALIZATION	100.00%		

5 WEIGHTED COST OF CAPITAL

8.54%

REFERENCES:

COLUMN (A): DIRECT TESTIMONY WAR

COLUMN (B): COLUMN (A) ÷ COLUMN (A), LINE 4

COLUMN (C): COLUMN (A) x COLUMN (B)

GOLD CANYON SEWER COMPANY TEST YEAR ENDED DECEMBER 31, 2004 COST OF CAPITAL SUMMARY

DOCKET NO. SW-02519A-06-0015 SURREBUTTAL SCHEDULE WAR - 1 PAGE 2 OF 2

SAMPLE COMPANIES APPROXIMATE WEIGHTED COSTS OF DEBT

LINE <u>NO.</u>	STOCK SYMBOL	COMPANY	WEIGHTED COSTS		
1	AWR	AMERICAN STATES WATER CO.	7.12%		
2	CWT	CALIFORNIA WATER SERVICE GROUP	6.51%		
3	SWWC	SOUTHWEST WATER COMPANY	6.70%		
4	WTR	AQUA AMERICA, INC.	5.74%		
5	CTWS	CONNECTICUT WATER SERVICES, INC.	5.13%		
6	MSEX	MIDDLESEX WATER COMPANY	5.66%		
7	SJW	SJW CORP.	7.23%		
8	YORW	YORK WATER COMPANY	7.48%		
9	AVERAGE	OF APPROXIMATE WEIGHTED COSTS OF DEBT (a)		6.45%	AVERAGE OF LINES 1 THRU 8
10	ADD: 200	BASIS POINTS		2.00%	DIRECT TESTIMONY WAR
11	RUCO REC	COMMENDED COST OF DEBT		8.45%	LINE 9 + LINE 10

REFERENCE:

MOST RECENT SEC 10-K FILINGS

NOTE:

(a) COSTS ARE APPROXIMATE AND DO NOT INCLUDE THE FOLLOWING:

DEBT ISSUES THAT DID NOT HAVE STATED YIELDS; AND

DEBT ISSUES WITH ZERO RATES OF INTEREST.

IN THE CASE OF ISSUES WITH VARIABLE RATES OF INTEREST. THE HIGH END OF THE VARIABLE RANGE WAS USED.

GOLD CANYON SEWER COMPANY TEST YEAR ENDED DECEMBER 31, 2004 DCF COST OF EQUITY CAPITAL

DOCKET NO. SW-02519A-06-0015 SURREBUTTAL SCHEDULE WAR - 2

LINE <u>NO.</u>	STOCK SYMBOL	COMPANY	(A) DIVIDEND YIELD	+ .	(B) GROWTH RATE (g)	=	(C) DCF COST OF EQUITY CAPITAL
1	AWR	AMERICAN STATES WATER CO.	2.49%	+	7.25%	=	9.74%
2	CWT	CALIFORNIA WATER SERVICE GROUP	3.26%	+	5.34%	=	8.60%
3	SWWC	SOUTHWEST WATER COMPANY	1.72%	+	5.25%	=	6.97%
4	WTR	AQUA AMERICA, INC.	1.96%	+	7.13%	=	9.09%
5	WATER COM	PANY AVERAGE					8.60%

GOLD CANYON SEWER COMPANY TEST YEAR ENDED DECEMBER 31, 2004 DIVIDEND YIELD CALCULATION

DOCKET NO. SW-02519A-06-0015 SURREBUTTAL SCHEDULE WAR - 3

LINE	STOCK		(A) ESTIMATED DIVIDEND		(B) AVERAGE STOCK PRICE		(C) DIVIDEND
<u>NO.</u>	SYMBOL	COMPANY	(PER SHARE)	÷	(PER SHARE)	=	YIELD
1	AWR	AMERICAN STATES WATER CO.	\$0.90	÷	\$36.14	=	2.49%
2	CWT	CALIFORNIA WATER SERVICE GROUP	1.15	÷	35.33	=	3.26%
3	SWWC	SOUTHWEST WATER COMPANY	0.21	÷	12.09	=	1.72%
4	WTR	AQUA AMERICA, INC.	0.43	÷	22.07	=	1.96%
5	WATER COMPAN	Y AVERAGE					2.36%

REFERENCES:

COLUMN (A): ESTIMATED 12 MONTH DIVIDEND REPORTED IN VALUE LINE INVESTMENT

SURVEY - RATINGS & REPORTS DATED 07/28/2006

COLUMN (B): EIGHT WEEK AVERAGE OF CLOSING PRICES FROM 06/12/2006 TO 08/04/2006

STOCK QUOTES OBTAINED THROUGH BIG CHARTS WEB SITE - HISTORICAL QUOTES (www.bigcharts.com).

COLUMN (C): COLUMN (A) ÷ COLUMN (B)

GOLD CANYON SEWER COMPANY TEST YEAR ENDED DECEMBER 31, 2004 DIVIDEND GROWTH RATE CALCULATION

DOCKET NO. SW-02519A-06-0015 SURREBUTTAL SCHEDULE WAR - 4 PAGE 1 OF 2

LINE NO.	STOCK SYMBOL	COMPANY	(A) INTERNAL GROWTH (br)	+_	(B) EXTERNAL GROWTH (sv)	_ = _	(C) DIVIDEND GROWTH (g)
1	AWR	AMERICAN STATES WATER CO.	5.00%	+	2.25%	=	7.25%
2	CWT	CALIFORNIA WATER SERVICE GROUP	3.25%	+	2.09%	=	5.34%
3	SWWC	SOUTHWEST WATER COMPANY	4.45%	+	0.80%	=	5.25%
4	WTR	AQUA AMERICA, INC.	6.00%	+	1.13%	=	7.13%
5	WATER COM	IPANY AVERAGE				[6.25%

REFERENCES:

COLUMN (A): SURREBUTTAL TESTIMONY, WAR

COLUMN (B): SURREBUTTAL SCHEDULE WAR - 4, PAGE 2, COLUMN C

COLUMN (C): COLUMN (A) + COLUMN (B)

GOLD CANYON SEWER COMPANY TEST YEAR ENDED DECEMBER 31, 2004 DIVIDEND GROWTH RATE CALCULATION

DOCKET NO. SW-02519A-06-0015 SURREBUTTAL SCHEDULE WAR - 4 PAGE 2 OF 2

			(A)				(B)									(C) EXTERNAL			
LINE <u>NO.</u>	STOCK SYMBOL	COMPANY	SHARE GROWTH	х	ſ	r /	(M ÷ B	١	+	1	١ -	÷	2	1 -	1	ι	=	GROWTH (sv)
<u>110.</u>	OTWIDOL	COMITATOR	OROWIII	. ^		L (IVI - D			-	<i>)</i>							(37)
1	AWR	AMERICAN STATES WATER CO.	4.00%	X	{	[((2.13)	+	1) -	÷	2] -	1	}	=	2.25%
2	CWT	CALIFORNIA WATER SERVICE GROUP	3.75%	X	{	[((2.12)	+	1) -	÷	2] -	1	}	=	2.09%
3	SWWC	SOUTHWEST WATER COMPANY	2.00%	X	{	[((1.80)	+	1) -	÷	2] -	1	}	=	0.80%
4	WTR	AQUA AMERICA, INC.	1.00%	X	{	[((3.27)	+	1) -	÷	2] -	1	}	=	1.13%
5	WATER COMP	ANY AVERAGE																	1.57%

REFERENCES:

COLUMN (A): SURREBUTTAL TESTIMONY, WAR COLUMN (B): VALUE LINE INVESTMENT SURVEY

- RATINGS & REPORTS DATED 04/28/2006

COLUMN (C): COLUMN (A) x COLUMN (B)

GOLD CANYON SEWER COMPANY TEST YEAR ENDED DECEMBER 31, 2004 DIVIDEND GROWTH COMPONENTS

DOCKET NO. SW-02519A-06-0015 SURREBUTTAL SCHEDULE WAR - 5

LINE NO.	STOCK SYMBOL	WATER COMPANY NAME	OPERATING PERIOD	(A) RETENTION RATIO (b) x	(B) RETURN ON BOOK EQUITY (r) =	(C) DIVIDEND GROWTH (g)	(D) BOOK VALUE (\$/SHARE)	(E) SHARES OUTST. (MILLIONS)	(F) SHARE GROWTH
1	AWR	AMERICAN STATES WATER CO.	2001	0.3556	10.10%	3.59%	13.22	15.12	
2			2002	0.3507	9.50%	3.33%	14.05	15.18	
3			2003	-0.1282	5.60%	-0.72%	13.97	15.21	
4			2004	0.1524	6.60%	1.01%	15.01	16.75	
5			2005	0.3182	8.50%	2.70%	<u>15.72</u>	<u>16.80</u>	
6			GROWTH 2001 - 200	05		1.98%	4.50%		2.67%
7			2006	0.4313	9.50%	4.10%		17.50	4.17%
8			2007	0.4424	9.50%	4.20%		18.25	4.23%
9			2009-11	0.4947	10.00%	4.95%	5.00%	20.50	4.06%
10									
11	CWT	CALIFORNIA WATER SERVICE GROUP	2001	-0.1915	7.20%	-1.38%	12.95	15.18	
12			2002	0.1040	9.50%	0.99%	13.12	15.18	
13			2003	0.0744	7.90%	0.59%	14.44	16.93	
14			2004	0.2260	9.00%	2.03%	15.66	18.37	
15			2005	0.2245	9.30%	2.09%	15.98	<u>18.39</u>	
16			GROWTH 2001 - 200		0.500/	0.86%	1.50%	40.00	4.91%
17			2006	0.3030	9.50%	2.88%		19.00	3.32%
18			2007	0.3371	10.50%	3.54%	= 000/	19.50	2.97%
19 20			2009-11	0.3222	9.00%	2.90%	5.00%	22.00	3.65%
21	SWWC	SOUTHWEST WATER COMPANY	2001	0.6667	11.40%	7.60%	3.84	14.17	
22			2002	0.6154	9.70%	5.97%	4.27	14.35	
23			2003	0.6364	9.10%	5.79%	4.90	16.17	
24			2004	0.2174	3.60%	0.78%	6.17	20.36	
25			2005	0.4118	5.00%	2.06%	6.49	22.33	
26			GROWTH 2001 - 200			4.44%	14.00%		12.04%
27			2006	0.3784	5.00%	1.89%		23.00	3.00%
28			2007	0.4444	6.50%	2.89%		23.00	1.49%
29			2009-11	0.5571	8.00%	4.46%	5.00%	24.00	1.45%
30									
31	WTR	AQUA AMERICA, INC.	2001	0.4118	12.40%	5.11%	4.15	113.97	
32			2002	0.4074	12.70%	5.17%	4.36	113.19	
33			2003	0.3860	10.20%	3.94%	5.34	123.45	
34			2004	0.4219	10.70%	4.51%	5.89	127.18	
35			2005	0.4366	11.20%	4.89%	6.30	<u>128.97</u>	0.110/
36			GROWTH 2001 - 200		44.500/	4.72%	11.00%	100.00	3.14%
37			2006	0.4133	11.50%	4.75%		130.00	0.80%
38			2007	0.4235	11.50%	4.87%	7.000/	131.00	0.78%
39			2009-11	0.4500	13.50%	6.08%	7.00%	134.00	0.77%

REFERENCES:

COLUMNS (A) & (B): VALUE LINE INVESTMENT SURVEY

- RATINGS & REPORTS DATED 07/28/2006

COLUMN (C): COLUMN (A) x COLUMN (B)

COLUMN (C): LINES 6, 16 & 26, SIMPLE AVERAGE GROWTH, 2001 - 2005

COLUMN (D): VALUE LINE INVESTMENT SURVEY

COLUMN (D): LINES 6, 16 & 26, COMPOUND GROWTH RATE

COLUMN (E): VALUE LINE INVESTMENT SURVEY

COLUMN (F): COMPOUND GROWTH RATES OF DATES SHOWN

WATER COMPANY SAMPLE:

		(A)	(B)		(C)			(D)	8	(E)		(F)	
LINE	STOCK		ZACKS		VALUE LINE PROJECTED			VALUE LINE HISTORIC		VALUE LINE &		5 - YEAR COMPOUND HISTORY	
NO.	SYMBOL	(br)+(sv)	EPS	EPS	DPS	BVPS	EPS	DPS	BVPS	ZACKS AVGS.	EPS	DPS	BVPS
1	AWR	7.25%	6.00%	4.50%	1.00%	5.00%	-2.50%	1.00%	4.50%	2.79%	-0.56%	0.85%	4.43%
2	CWT	5.34%	9.00%	4.50%	1.00%	5.00%	-4.00%	1.00%	1.50%	2.57%	11.83%	0.44%	5.40%
3	SWWC	5.25%	5.50%	12.00%	9.00%	5.00%	1.50%	10.00%	14.00%	8.14%	-5.15%	9.33%	14.02%
4	WTR	7.13%	8.80%	11.00%	10.00%	7.00%	8.50%	6.50%	11.00%	8.97%	8.62%	7.46%	11.00%
5				8.00%	5.25%	5.50%	0.88%	4.63%	7.75%		3.69%	4.52%	8.71%
6	AVERAGES	6.25%	7.33%		6.25%			4.42%		5.62%		5.64%	

REFERENCES:

COLUMN (A): SURREBUTTAL SCHEDULE WAR - 4, PAGE 1, COLUMN C

COLUMN (B): ZACKS INVESTMENT RESEARCH (www.zacks.com)

COLUMN (C): VALUE LINE INVESTMENT SURVEY - RATINGS & REPORTS DATED 07/28/2006

COLUMN (D): VALUE LINE INVESTMENT SURVEY - RATINGS & REPORTS DATED 07/28/2006

COLUMN (E): SIMPLE AVERAGE OF COLUMNS (B) THRU (D) LINES 1, 3, 5 AND 7

COLUMN (F): 5-YEAR ANNUAL GROWTH RATE CALCULATED WITH DATA COMPILED FROM VALUE LINE INVESTMENT SURVEY

- RATINGS & REPORTS DATED 07/28/2006

BASED ON A GEOMETRIC MEAN:

LINE	STOCK	l.		r		(A)	.,	,	r			\ 1	_	(B) EXPECTED
<u>NO.</u>	SYMBOL	k	=	r _f	+ [ß	Х	(r _m	-	r _f	<u>)]</u>	=	RETURN
1	AWR	k	=	4.97%	+ [0.75	x	(10.40%	-	4.97%)]	=	9.04%
2	CWT	k	=	4.97%	+ [0.80	х	(10.40%	-	4.97%)]	=	9.31%
3	SWWC	k	=	4.97%	+ [0.70	х	(10.40%	-	4.97%)]	=	8.77%
4	WTR	k	=	4.97%	+ [0.80	х	(10.40%	-	4.97%)]	=	9.31%
5	WATER COM	IPANY A	VEF	RAGE		0.76								9.11%

REFERENCES:

COLUMN (A): SHARPE LITNER CAPITAL ASSET PRICING MODEL ("CAPM") FORMULA

$$k = r_f + [\beta (r_m - r_f)]$$

WHERE: k = THE EXPECTED RETURN ON A GIVEN SECURITY

r_f = RATE OF RETURN ON A RISK FREE ASSET PROXY (a)

 β = THE BETA COEFFICIENT OF A GIVEN SECURITY r_m = PROXY FOR THE MARKET RATE OF RETURN (b)

COLUMN (B): EXPECTED RATE OF RETURN USING THE CAPM FORMULA

NOTES

- (a) A 6-WEEK AVERAGE OF THE 91-DAY T-BILL RATES THAT APPEARED IN <u>VALUE LINE INVESTMENT SURVEY'S</u>
 "SELECTION & OPINIONS" PUBLICATION FROM 06/22/2006 THROUGH 08/04/2006 WAS USED AS A RISK FREE RAT
 OF RETURN.
- (b) THE MARKET RATE PROXY USED WAS THE ARITHMETIC MEAN FOR S&P 500 RETURNS OVER THE 1926 2005 PERIOD. THE DATA WAS OBTAINED FROM IBBOTSON ASSOCIATES' STOCKS, BONDS, BILLS AND INFLATION: 2006 YEARBOOK.

GOLD CANYON SEWER COMPANY TEST YEAR ENDED DECEMBER 31, 2004 CAPM COST OF EQUITY CAPITAL

DOCKET NO. SW-02519A-06-0015 SURREBUTTAL SCHEDULE WAR - 7 PAGE 2 OF 2

BASED ON AN ARITHMETIC MEAN:

LINE	STOCK					(A)								(B) EXPECTED
NO.	SYMBOL	k	=	r _f	+ [ß	х	(r _m	-	r _f)]	=	RETURN
1	AWR	k	=	4.97%	+ [0.75	х	(12.30%	-	4.97%)]	=	10.47%
2	CWT	k	=	4.97%	+ [0.80	х	(12.30%	-	4.97%)]	=	10.83%
3	SWWC	k	=	4.97%	+ [0.70	х	(12.30%	-	4.97%)]	=	10.10%
4	WTR	k	=	4.97%	+ [0.80	х	(12.30%	-	4.97%)]	=	10.83%
5	WATER COM	IPANY	AVE	RAGE		0.76								10.56%

REFERENCES:

COLUMN (A): SHARPE LITNER CAPITAL ASSET PRICING MODEL ("CAPM") FORMULA

$$k = r_f + [\beta (r_m - r_f)]$$

WHERE: k = THE EXPECTED RETURN ON A GIVEN SECURITY

r_f = RATE OF RETURN ON A RISK FREE ASSET PROXY (a)

ß = THE BETA COEFFICIENT OF A GIVEN SECURITY

r_m = PROXY FOR THE MARKET RATE OF RETURN (b)

COLUMN (B): EXPECTED RATE OF RETURN USING THE CAPM FORMULA

NOTES

- (a) A 6-WEEK AVERAGE OF THE 91-DAY T-BILL RATES THAT APPEARED IN <u>VALUE LINE INVESTMENT SURVEY'S</u>
 "SELECTION & OPINIONS" PUBLICATION FROM 06/22/2006 THROUGH 08/04/2006 WAS USED AS A RISK FREE RA
 OF RETURN.
- (b) THE MARKET RATE PROXY USED WAS THE ARITHMETIC MEAN FOR S&P 500 RETURNS OVER THE 1926 2005 PERIOD. THE DATA WAS OBTAINED FROM IBBOTSON ASSOCIATES' STOCKS, BONDS, BILLS AND INFLATION: 2006 YEARBOOK.

GOLD CANYON SEWER COMPANY TEST YEAR ENDED DECEMBER 31, 2004 CAPITAL STRUCTURES OF SAMPLE COMPANIES

DOCKET NO. SW-02519A-06-0015 SURREBUTTAL SCHEDULE WAR -

LINE									W	ATER CO	MPANY
<u>NO.</u>		AWR	PCT.	CWT	PCT. S	WWC	PCT.	WTR	PCT. AV	ERAGE	PCT.
1	DEBT	\$ 268.4	50.4% \$	274.1	48.0% \$	117.6	44.7%	878.4	52.0% \$	384.6	50.3%
3	PREFERRED STOCK	0.0	0.0%	3.5	0.6%	0.5	0.2%	0.0	0.0%	1.0	0.1%
5	COMMON EQUITY	264.1	49.6%	293.9	51.4%	144.8	55.1%	811.9	48.0%	378.7	49.5%
6 7	TOTALS	\$ 532.5	100% \$	571.5	100% \$	262.9	100% \$	5 1,690.3	100% \$	764.3	100%

REFERENCE:

MOST RECENT SEC 10-K FILINGS

FAR WEST WATER AND SEWER COMPANY TEST YEAR ENDED DECEMBER 31, 2004 WEIGHTED COST OF CAPITAL OF SAMPLE COMPANIES

DOCKET NO. SW-02519A-06-0015 SURREBUTTAL SCHEDULE WAR - 9

LINE <u>NO.</u>		AWR	CAPITAL RATIO	COST	WEIGHTED COST CWT	CAPITAL RATIO	COST	WEIGHTED COST				
1 2	DEBT	\$268.4	50.4%	7.12%	3.59% \$ 274	1 48.0%	6.51%	3.12%				
3	PREFERRED STOCK	0.0	0.0%	0.00%	0.00% 3	.5 0.6%	4.40%	0.03%				
5 6	COMMON EQUITY	264.1	49.6%	9.74%	4.83% 293	.9 51.4%	8.60%	4.4%				
7 8	TOTALS	\$532.5	100%		8.42% \$ 571.	5 100%		7.573%				
9									WAT	ER COMPA	NY AVER	AGES
10			CAPITAL		WEIGHTED	CAPITAL		WEIGHTED		CAPITAL		WEIGHTED
11		SWWC	RATIO	COST	COST WTR	RATIO	COST	COST	AVERAGE	RATIO	COST	COST
12												
13 14	DEBT	\$117.6	44.7%	6.70%	3.00% \$ 878	4 52.0%	5.74%	2.98%	\$ 384.6	50.3%	6.52%	3.28%
15 16	PREFERRED STOCK	0.5	0.2%	5.05%	0.01%	.0 0.0%	0.00%	0.00%	1.0	0.1%	2.36%	0.00%
17	COMMON EQUITY	144.8	55.1%	6.97%	3.84% 811	.9 48.0%	9.09%	4.37%	378.7	49.5%	8.60%	4.26%
18 19	TOTALS	\$262.9	100%		6.85% #####	# 100%		7.35%	\$ 764.3	100%		7.54%

REFERENCE:

COSTS OF DEBT: SURREBUTTAL TESTIMONY SCHEDULE WAR-1, PAGE 2 COSTS OF PREFERRED STOCK: MOST RECENT SEC 10-K FILINGS COSTS OF COMMON EQUITY: SURREBUTTAL TESTIMONY SCHEDULE WAR-2

CAPITAL RATIO: SURREBUTTAL TESTIMONY SCHEDULE WAR-8

WEIGHTED COST: CAPITAL RATIO x COST